

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q84298

Hitoshi KIDOKORO, et al.

Appln. No.: 10/517,656

Group Art Unit: 3742

Confirmation No.: 1603

Examiner: Heinrich, Samuel M.

Filed: December 13, 2004

For: LASER MACHINING APPARATUS AND CONTROL METHOD FOR THE  
APPARATUS

**REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41**

**MAIL STOP APPEAL BRIEF - PATENTS**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.41, Appellant respectfully submits this Reply Brief in response to the Examiner's Answer dated June 9, 2008. Entry of this Reply Brief is respectfully requested.

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**STATUS OF CLAIMS**

Claims 1, 3, 5 and 6 are all the claims pending in the Application and are the basis of this Appeal. Claims 2 and 4 have been canceled.

Claims 1, 3, 5 and 6 stand rejected.

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

A. Claims 1, 3 and 5 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over JP 57186378 to Yoshihide in view of JP 405022941, JP 358141689 and JP 407111427.

B. Claim 6 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Yoshihide in view of JP 405022941, JP 358141689, JP 407111427 and JP 403011904.

**ARGUMENT**

Appellant stands by the arguments presented in the July 24, 2007 Appeal Brief.

Additionally, Appellant provides the following remarks in response to the Examiner's Answer, dated June 9, 2008.

On page 3 of the Final Office Action, the Examiner maintains,

“The use of a power pulse train with a higher frequency than the laser output response frequency is the same as setting the switching cycle to be faster than the time constant of discharge power and laser output, and controlling the overall width of this thinned or proportioned pulse train would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art in order to obtain output control having no dead band.” (emphasis added) (pg. 3 of Final Office Action)

On page 10 of the July 24, 2007 Appeal Brief, Appellant noted that in regard to the Examiner's comments of the alleged motivation to combine references, Yoshihide already discloses that its invention does not generate a dead band (English Abstract). In the Examiner's Answer, the Examiner responds to Appellant's argument by stating that the argument is not convincing (pg. 5 of June 9, 2008 Examiner's Answer). Appellant submits, however, that the fact that Yoshihide discloses that his invention does *not* generate a dead band is clearly relevant as it is directly related to the Examiner's alleged motivation to combine the references. Since Yoshihide discloses that its invention does not generate a dead band, the Examiner's alleged motivation or reason for modifying Yoshihide in this regard is refuted. Put differently, what possible motivation would one of skill have to modify a reference to include a feature *that it already has*?

Furthermore, the Examiner continues to broadly allege that JP 405022941, JP 358141689 and JP 407111427 teach that it is well known to pulse modulate in response to pulse width and to control a motor, or volume, using pulse trains controlled in response to pulse width (pgs. 5 and 6 of Examiner's Answer). However, as set forth on page 11 of the July 24, 2007 Appeal Brief, JP 405022941 discloses a pulse train that is made to have as its amplitude, a voltage proportional to a converter voltage, and by using a low-pass filter, a reference current is obtained. In JP 358141689, a pulse width is modulated in response to a targeted speed. Finally, in JP 407111427, the number of command pulses is thinned out for controlling an output amplitude value.

Appellants submit that JP 405022941, JP 358141689 and JP 407111427 do not control their own output pulses for the purpose of effecting a change in the pulse output characteristic of an independent unit, as in the present invention. There is no probability of success in applying a PWM for audio volume control, to control the repetition rate of a pulse laser, to take just one example. Thus, the above references fail to teach or suggest the claimed operation of a number of command pulses being thinned out based on setting the laser output pulse width, as recited in claims 1 and 5. Furthermore, Appellant notes that the Examiner has not pointed to any specific portion of each of JP 405022941, JP 358141689 and JP 407111427 to substantiate the allegation that this feature is known.

For at least the above reasons, Appellant continues to maintain that claims 1 and 5 are patentable over the cited references, along with respective dependent claims 3 and 6.

**CONCLUSION**

For the above reasons as well as the reasons set forth in Appeal Brief, Appellant respectfully requests that the Board reverse the Examiner's rejections of all claims on Appeal.

An early and favorable decision on the merits of this Appeal is respectfully requested.

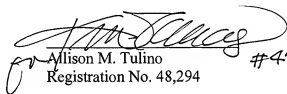
Respectfully submitted,

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**23373**

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